

## LICENSEE EVENT REPORT

UPDATE REPORT

PREVIOUS REPORT DATE: 10/23/81

CONTROL BLOCK: 

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

 ①

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

|   |   |               |   |   |   |   |   |    |                |    |   |   |   |   |   |   |   |   |   |              |    |   |   |   |   |    |     |    |   |
|---|---|---------------|---|---|---|---|---|----|----------------|----|---|---|---|---|---|---|---|---|---|--------------|----|---|---|---|---|----|-----|----|---|
| 0 | 1 | M             | D | C | C | N | 2 | 2  | 0              | 0  | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3            | 4  | 1 | 1 | 1 | 1 | 4  |     |    | 5 |
| 7 | 8 | 9             |   |   |   |   |   | 14 | 15             | 25 |   |   |   |   |   |   |   |   |   | 26           | 30 |   |   |   |   | 57 | CAT | 58 |   |
|   |   | LICENSEE CODE |   |   |   |   |   |    | LICENSE NUMBER |    |   |   |   |   |   |   |   |   |   | LICENSE TYPE |    |   |   |   |   |    |     |    |   |

CON'T

0 1 7 8 REPORT SOURCE L 6 0 5 0 0 0 3 1 8 7 0 9 2 3 8 1 8 0 5 1 9 8 3 9 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 | During Mode 4 operation at 2255 while performing surveillance testing,

03 | #22 Main Steam Isolation Valve (MSIV) stroked shut in 3.67 seconds,

0.07 seconds over the maximum allowed by T.S. 3.7.1.5. The valve was

05 | retested and restored to service at 0045 on 9/24/81. Similar events

in Docket #50-317; 81-44, 81-24 and 78-37. In Docket #50-318: 81-07

|   |   |
|---|---|
| 0 | 7 |
|---|---|

 and 78-36.

|                            |    |                    |    |                                |                        |                               |                  |                           |                       |                                   |    |    |    |    |
|----------------------------|----|--------------------|----|--------------------------------|------------------------|-------------------------------|------------------|---------------------------|-----------------------|-----------------------------------|----|----|----|----|
| 09                         |    | SYSTEM CODE<br>C D |    | CAUSE CODE<br>B                | CAUSE SUBCODE<br>B     | COMPONENT CODE<br>V A L V E X |                  | COMP. SUBCODE<br>F        | VALVE SUBCODE<br>D    |                                   |    |    |    |    |
| 7                          | 8  | 9                  | 10 | 11                             | 12                     | 13                            | 14               | 15                        | 16                    |                                   |    |    |    |    |
| LER/RO REPORT NUMBER<br>17 |    | EVENT YEAR<br>8 1  |    | SEQUENTIAL REPORT NO.<br>0 4 0 | OCCURRENCE CODE<br>0 3 |                               | REPORT TYPE<br>L | REVISION NO.<br>1         |                       |                                   |    |    |    |    |
| 21                         | 22 | 23                 | 24 | 25                             | 26                     | 27                            | 28               | 29                        | 30                    | 31                                |    |    |    |    |
| ACTION TAKEN<br>A          |    | FUTURE ACTION<br>Z |    | EFFECT ON PLANT<br>Z           |                        | SHUTDOWN METHOD<br>Z          |                  | HOURS<br>0 0 0 0          |                       | ATTACHMENT SUBMITTED<br>Y         |    |    |    |    |
| 33                         | 34 | 35                 | 36 | 37                             | 38                     | 39                            | 40               | 41                        | NPRD-4 FORM SUB.<br>Y |                                   |    |    |    |    |
| 18                         | 19 | 20                 | 21 | 22                             | 23                     | 24                            | 25               | PRIME COMP. SUPPLIER<br>A |                       | COMPONENT MANUFACTURER<br>R 3 4 0 |    |    |    |    |
| 33                         | 34 | 35                 | 36 | 37                             | 38                     | 39                            | 40               | 41                        | 42                    | 43                                | 44 | 45 | 46 | 47 |

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 | During the most recent refueling outage, the valve packing junk ring was

111 | discovered to have galled the stem. The ring was tested and found to be

an alloy instead of a mild steel. Being very close to the stem, the ring

was binding the stem, slowing valve closure. The ring was replaced with

1 4 | a proper one, and the purchase spec. was revised to prevent recurrence.

7 8 9  
FACILITY STATUS  
1 5 G 28  
% POWER  
0 0 0 29  
OTHER STATUS 30  
METHOD OF DISCOVERY  
B 31  
DISCOVERY DESCRIPTION 32  
Surveillance Testing

ACTIVITY CONTENT  
RELEASED OF RELEASE

1 6 Z 33 34

7 8 9 10 11

AMOUNT OF ACTIVITY (35)

NA

44

LOCATION OF RELEASE (36)

NA

45

| PERSONNEL EXPOSURES |   |   |      |             |    |   |    |    |  |
|---------------------|---|---|------|-------------|----|---|----|----|--|
| NUMBER              |   |   | TYPE | DESCRIPTION |    |   |    |    |  |
| 1                   | 7 | 0 | 0    | 0           | 37 | Z | 38 | NA |  |

| PERSONNEL INJURIES |   | NUMBER |   | DESCRIPTION |       |
|--------------------|---|--------|---|-------------|-------|
| 1                  | 8 | 0      | 0 | 0           | 40 NA |

| 1 |  | 2 |  | 3 |  | 4 |  | 5 |  | 6 |  | 7 |  | 8 |  | 9 |  | 10 |  | 11 |  | 12 |  | 13 |  | 14 |  | 15 |  | 16 |  | 17 |  | 18 |  | 19 |  | 20 |  | 21 |  | 22 |  | 23 |  | 24 |  | 25 |  | 26 |  | 27 |  | 28 |  | 29 |  | 30 |  | 31 |  | 32 |  | 33 |  | 34 |  | 35 |  | 36 |  | 37 |  | 38 |  | 39 |  | 40 |  | 41 |  | 42 |  | 43 |  | 44 |  | 45 |  | 46 |  | 47 |  | 48 |  | 49 |  | 50 |  | 51 |  | 52 |  | 53 |  | 54 |  | 55 |  | 56 |  | 57 |  | 58 |  | 59 |  | 60 |  | 61 |  | 62 |  | 63 |  | 64 |  | 65 |  | 66 |  | 67 |  | 68 |  | 69 |  | 70 |  | 71 |  | 72 |  | 73 |  | 74 |  | 75 |  | 76 |  | 77 |  | 78 |  | 79 |  | 80 |  | 81 |  | 82 |  | 83 |  | 84 |  | 85 |  | 86 |  | 87 |  | 88 |  | 89 |  | 90 |  | 91 |  | 92 |  | 93 |  | 94 |  | 95 |  | 96 |  | 97 |  | 98 |  | 99 |  | 100 |  |
|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|----|--|-----|--|
| 1 |  | 2 |  | 3 |  | 4 |  | 5 |  | 6 |  | 7 |  | 8 |  | 9 |  | 10 |  | 11 |  | 12 |  | 13 |  | 14 |  | 15 |  | 16 |  | 17 |  | 18 |  | 19 |  | 20 |  | 21 |  | 22 |  | 23 |  | 24 |  | 25 |  | 26 |  | 27 |  | 28 |  | 29 |  | 30 |  | 31 |  | 32 |  | 33 |  | 34 |  | 35 |  | 36 |  | 37 |  | 38 |  | 39 |  | 40 |  | 41 |  | 42 |  | 43 |  | 44 |  | 45 |  | 46 |  | 47 |  | 48 |  | 49 |  | 50 |  | 51 |  | 52 |  | 53 |  | 54 |  | 55 |  | 56 |  | 57 |  | 58 |  | 59 |  | 60 |  | 61 |  | 62 |  | 63 |  | 64 |  | 65 |  | 66 |  | 67 |  | 68 |  | 69 |  | 70 |  | 71 |  | 72 |  | 73 |  | 74 |  | 75 |  | 76 |  | 77 |  | 78 |  | 79 |  | 80 |  | 81 |  | 82 |  | 83 |  | 84 |  | 85 |  | 86 |  | 87 |  | 88 |  | 89 |  | 90 |  | 91 |  | 92 |  | 93 |  | 94 |  | 95 |  | 96 |  | 97 |  | 98 |  | 99 |  | 100 |  |

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

PUBLICATION (45) 8306020438 830519  
ISSUED DESCRIPTION (44) NA PDR ADOCK 05000318 PDR NRC USE ONLY

2 0 N (44) NA PDR

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

NAME OF PREPARER R. L. Wenderlich/P. J. Weir

PHONE 301-269-4776/4871

# BALTIMORE GAS AND ELECTRIC COMPANY

P.O. BOX 1475

BALTIMORE, MARYLAND 21203

NUCLEAR POWER DEPARTMENT  
CALVERT CLIFFS NUCLEAR POWER PLANT  
LUSBY, MARYLAND 20657

May 19, 1983

Mr. James M. Allan  
Acting Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region 1  
631 Park Avenue  
King of Prussia, PA 19406

Docket No. 50-318  
License No. DPR 69

Dear Mr. Allan:

In accordance with Technical Specification 6.9 please find the attached follow-up report for LER 81-40/3X, Rev. 1.

Should you have any questions regarding this report, we would be pleased to discuss them with you.

Very truly yours,

*John B. Russell*  
for L. B. Russell  
Plant Superintendent

LB:R:PJW:bsb

cc: Director, Office of Management Information  
and Program Control

Messrs: A. E. Lundvall, Jr.  
J. A. Tiernan

*IER*  
*11*

LER NO. 81-40/3X, Rev. 1  
DOCKET NO. 50-318  
LICENSE NO. DPR-69  
EVENT DATE 9/23/81  
REPORT DATE 5/19/83  
ATTACHMENT

#### CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

During the most recent refueling outage, 22 MSIV was disassembled and overhauled. During disassembly, heavy stem galling was observed to have extended to the junk ring location inside the packing gland. Subsequent x-ray spectography indicated that the junk ring which was removed was composed of an alloy chemically similar to an AISI grade 4140 chromium molybdenum. The drawing of the valve calls for a AISI grade 1015-1025 mild carbon steel.

Upon each stroke of the MSIV, the junk ring is the closest stationary part to the valve stem (.005" clearance). Thus, it should be, as designed, a significantly softer steel than the stainless steel stem. If, as found, it is a steel similar in hardness to the stem, galling may and did occur. This tends to bind the stem, slowing valve closure.

Before reassembly, a junk ring made of the proper material was fabricated on site and installed in the valve.

The purchase specification by which replacement parts are obtained from the manufacturer has been changed to require documentation of proper junk ring material composition. The first junk rings procured since then have been tested by the licensee and determined to, in fact, be mild steel. Additionally, the valve overhaul procedure has been changed to make the final bonnet bolt torque pass after backseating the valve. This will result in a better alignment of the bonnet and its enclosed packing chamber parts (including the junk ring) with the valve stem.